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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,709	03/31/2004	Upendra V. Chaudhari	YOR920040077US1 (590.131)	5114
35195 7590 08/10/2009 FERENCE & ASSOCIATES LLC 409 BROAD STREET PITTSBURGH, PA 15143			EXAMINER SAINT CYR, LEONARD	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 08/10/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,709	<b>Applicant(s)</b> CHAUDHARI ET AL.	
	<b>Examiner</b> LEONARD SAINT CYR	<b>Art Unit</b> 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 6 - 8 - 10, 12 - 17, 19 - 21, and 26 - 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6 - 8 - 10, 12 - 17, 19 - 21, and 26 - 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 04/29/09 have been fully considered but they are not persuasive.

Applicant argues that Kanevsky et al., does not teach performing a partial determination of the identity of the individual via issuing a stream of cues over time when there is an insufficient amount of inputs provided by the individual to perform a full identification (Amendment, pages 13 - 15).

The examiner disagrees, since Kanevsky et al., disclose “if the speaker doesn't provide his/her name, **the system may use other information and voice characteristics to generate the list of candidates...** The selected databases contain **personal user data, such as age, profession, family status, etc., as well as information about the user's voice, such as prototypes, prosody, speech rate, accent, etc...** The module 68, which **performs a voice classification analysis, checks for certain voice characteristics of the caller and browses the selected databases 66 via link 67 to eliminate users who do not fit these characteristics, thus narrowing the list of possible candidates...** This procedure continues **iteratively with more random questions and with more detailed levels of speaker classification analysis until one or none of the candidates remain**” (col.9, line 49 –col.10, line 11). Using databases that contain **information about the user's voice, such as prototypes, prosody, speech rate, accent, gender, etc,** to narrow the list of possible

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candidates of the potential caller **implies** performing a partial determination of the identity of the individual via issuing a stream of cues over time when there is an insufficient amount of inputs provided by the individual to perform a full identification, **since** this procedure continues **iteratively with more detailed levels of speaker classification analysis until one or none of the candidates remain.**

***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-3, 5, 6, 8 - 10, 12 – 17, 19, 20, and 26 - 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanevsky et al., (US Patent 6,529,871).

As per claims 1, 2, 8, 15, 16, and 29, Kanevsky et al., teach a computer implemented method for assessing the identity of an individual, said method comprising the steps of:

utilizing a processor to execute a program of instructions tangibly stored on a storage medium of a computer to perform method steps (col.5, line 66 – col.6, line 2), the method step comprising:

accepting input from an individual, wherein the input from the individual comprises spoken words (Abstract, line 3);

attributing a user group to the individual based upon the input (“performing a voice classification analysis”; Abstract, line 4; col.4, lines 20 – 23);

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issuing a cue associated with the user group (“gender, accent”; col.10, lines 52 – 55); and

repeating steps (a) – (c) until the identity of the individual is assessed the identity being assessed incrementally over a period of time via a series of issues cues (“iteratively repeating steps”; col.7, lines 15 – 40; col.4, lines 22 – 32);

wherein said repeating step further comprises performing a partial determination of the identity of the individual via issuing a stream of cues over time when there is an insufficient amount of inputs provided by the individual to perform a full identification (**“performs a voice classification analysis, checks for certain voice characteristics of the caller and browses the selected databases 66 via link 67 to eliminate users who do not fit these characteristics, thus narrowing the list of possible candidates...This procedure continues iteratively with more random questions and with more detailed levels of speaker classification analysis until one or none of the candidates remain”** col.9, line 49 –col.10, line 11).

As per claims 3, 9, and 17, Kanevsky et al., further disclose performing a gradual determination of the identity of the individual via issuing a stream of cues over time (“gender, speech rate, accent, etc.”), each of said cues being indicative of one or more user groups to which the individual belongs with a given degree of confidence based upon repeated inputs of the individual (“partial scores”; col.10, lines 52 – 55; col.7, lines 15 – 40).

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As per claim 10, Kanevsky et al., further disclose repeating step comprises of repeating steps (a)—(c) until the identity of the individual is authenticated comprises performing a gradual authentication of an identity claim of the individual via issuing a stream of cues over time, each of said cues being indicative of one or more user groups to which the individual belongs with a given degree of confidence based upon repeated inputs of the individual (“**performs a voice classification analysis, checks for certain voice characteristics of the caller and browses the selected databases 66 via link 67 to eliminate users who do not fit these characteristics, thus narrowing the list of possible candidates...**This procedure continues **iteratively with more random questions and with more detailed levels of speaker classification analysis until one or none of the candidates remain...partial scores...predetermined threshold**”; col.9, line 49 –col.10, line 11, col.7, lines 15 - 40).

As per claims 5, 6, 19, and 20, Kanevsky et al., further disclose attributing to the individual at least one user group that is distinct from any user group previously attributed; wherein the individual is identified by narrowing down a quantity of possible individuals into smaller user groups based upon repetition of steps (a) – (c) (“gender, accent”; col.10, lines 52 – 55).

As per claims 12, and 26, Kanevsky et al., further disclose that said repeating step further comprises the step of performing real time data retrieval; and said step of performing real time data retrieval comprises employing the issued cues to narrow down

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a database to be searched ("activating databases respectively corresponding to the speaker"; col.4, lines 16 – 18).

As per claims 13, and 27, Kanevsky et al., further disclose that said repeating step further comprises the step of performing real time discovery of the identity of the individual; and said step of performing real time discovery comprises employing the issued cues to narrow down user models which may represent the individual ("against an acoustic model attributable"; col.3, lines 53 – 55).

As per claims 14, and 28, Kanevsky et al., further disclose employing the issued cues to narrow down relevant imposter models which do not represent the individual ("against an acoustic model attributable...access may be denied to the speaker"; col.2, lines 53 – 55, and 62).

As per claim 30, and 31, Kanevsky et al., further disclose that the input from the individual comprises biometric data, wherein the biometric data comprises speech (col.8, line 46).

### ***Claim Rejections - 35 USC § 103***

4. Claims 7, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanevsky et al., (US Patent 6,529,871).

As per claims 7, and 21, Kanevsky et al., further computing a match score for the user group attributed to the individual in step (b) (“generating a score”; Abstract).

Kanevsky et al., do not specifically teach computing a similarity score as a distance measure between vectors of the match score and a stored score corresponding to an enrollment of the individual; and accepting the individual as authentic if all similarity scores exceed a predetermined threshold. However, since Kanevsky et al., disclose generating a score corresponding to the accuracy of the decoded answer and the closeness of the match between the voice sample and the model, and comparing the score to a predetermined threshold value (col.3, lines 55 – 60). One having ordinary skill in the art at the time the invention was made would have found it obvious to compute a similarity score in Kanevsky et al., because that would help control access of a speaker to one of a service and a facility (col.3, lines 34 – 36).

5. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanevsky et al., (US Patent 6,529,871) in view of Kanevsky et al., (US Patent 6,421,453).

As per claim 32, Kanevsky et al., (871) do not specifically that the biometric data comprises gait.

Kanevsky et al., (453) teach that natural behavioral or gestural biometrics include, for example, a user’s gait (col.14, lines 25 – 29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use biometric data as taught by Kanevsky et al., (453) in

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Kanevsky et al., (871), because that would help control access of an individual to one of a computer and a service and a facility (Kanevsky et al., (453); col.3, lines 25 – 30).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS

08/05/09

/Michael N. Opsasnick/

Primary Examiner, Art Unit 2626